

**THE EFFECTIVENESS OF QUANTUM METHOD
TO TEACH WRITING VIEWED FROM STUDENTS' CREATIVITY
(An Experimental Research to the Eighth Grade Students of SMP N 1 Bulukerto
in the 2011/2012 Academic Year)**



Written by:

TEGUH KIYATNO

NIM S.891008093

Thesis

**Written to Fulfill One of the Requirements
for Getting the Graduate Degree in English Education**

**ENGLISH DEPARTMENT
GRADUATE SCHOOL1
SEBELAS MARET UNIVERSITY**

2012

CHAPTER I

INTRODUCTION (1)

A. Background of the Study

	Course	Academic Writing
	Language : English : Four skills : Writing : Factors ... Writing :	Language : Human being > animal (innates - properties - function) English : Lingua Franca, Global Status, as (L1,L2,FL) Four skills : Importance EFL, Main Ideal, Main Problem Writing : Importance , Problems, Factors Factors ... Writing : Internal / External = teaching methods & Creativity

Language : Human being > animal (innates - properties - function)

English : Lingua Franca, Global Status, as (L1,L2,FL)

Four skills : Importance EFL, Main Ideal, Main Problem

1. WRITING SKILL

The Importance of Writing :

- Reinforcement-Language development-Learning style-Writing as a skill (Harmer, 1998)
- as a channel & a goal of foreign language learning (Wingard, 1981)

The Problems of Writing :

Writing skill as the most complex and difficult skill to master for most people,

- L2 writers' texts were less fluent, accurate, and effective (Silva,1993).
- Difficulties of generating, organizing, and translating ideas into readable text (Richards & Renandya, 2002)

The factors of Writing :

- Internal factors: learning motivation, *creativity*, etc.
- External factors : learning environment, *teaching methods*, etc

CHAPTER I

INTRODUCTION (2)

No	Variables	Research
0	Writing Skill (Y)	
1	Teaching Methods (X_1)	A_1 Quantum A_2 Direct Instruction
2	Psychological Aspects (X_2)	B_1 High CQ B_2 Low CQ

1. Direct Instruction Method (A_2)

Based on learning theories of behaviourism (Engelmann, 1964).

Five phases: orientation, presentation, structured practice, guided practice, independent practice (Setiawan, et al. ,2010)

2. Quantum Method (A_1)

Based on cognitive psychology in SuperCamp (DePorter,1982)

Seven phases: preparing, drafting, sharing, revising, editing, rewriting ,evaluating (DePorter & Hernacki, 2005a).

3. Creativity ($B_1 =$ High CQ & $B_2 =$ Low CQ)

Creativity is the ability to produce work that is both novel and appropriate (Sternberg & Lubart, 1999).

The students' creativity is predicted having significant contribution in improving the effectiveness of students' writing skill.

Research

The Effectiveness of Quantum Method (Compared with Direct Instruction) to Teach Writing Viewed from Students' Creativity (An Experimental Research to the Eighth Grade Students of SMP N 1 Bulukerto in the 2011/2012 Academic Year)

CHAPTER I

INTRODUCTION (3)

B. Problems Identification

Various problems concerning with students' writing skill.

C. Problems Limitation

The independent variables consist of the manipulative treatments (Quantum method and Direct Instruction method) as experimental variables (X_1) and the psychological aspect of the students' creativity (high and low) stated as attribute variable (X_2). Meanwhile, the students' writing skill as the effect or results of the experiment becomes the dependent variables (Y).

D. Problems Formulation

1. Is Quantum method more effective than Direct Instruction method to teach writing to the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year ?
2. Do the students who have high Creativity have better writing skill than those who have low Creativity of the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year ?
3. Is there an interaction between teaching methods and creativity in teaching writing to the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year ?

E. The Objectives of The Research :

finding out whether:

1. Quantum method is more effective than Direct Instruction method in teaching writing.
2. The students having high level of creativity have better writing skill than ones having low level of creativity.
3. There is an interaction between teaching methods and Creativity in teaching writing.

F. Benefits of the Study :

For students, For teachers, For other researchers

CHAPTER II

REVIEW OF RELATED LITERATURE (1)

A. Writing Skill

1. Definition of Writing Skill

Writing skill is a specific learned skill (*significant competence*) to express one's self, to provide information for one's reader, to persuade one's reader, and to create a literary work (*writer's purpose*) by procedure of thinking in planning, drafting and revising (*composing process*) into the symbolic representation of language through the use of graphic signs (*final product*).

2. Components of Writing Skill

- Sub-skills related to the accuracy in composing ideas correctly (grammar, vocabulary, mechanics, etc).
- Sub-skills related to the fluency in communicating ideas appropriately (content, organization, etc)

'Five indicators: grammar, vocabulary, mechanics, content, & organization

3. Teaching Writing Skill

- product oriented approach as a channel to reinforce and develop the grammatical structures, vocabulary items or text models. (Direct Instruction method)
- process oriented approach is taught as a goal to communicate ideas (Quantum method)

4. Testing Writing Skill

Writing composition in essay form as the final test with the analytical scoring profile suggested by Jacobs, et al (1981 in Brown, 2004: 243 - 246).

100 : content(30), organization(20), vocabulary (20), grammar/syntax (25), mechanics (5).

CHAPTER II

REVIEW OF RELATED LITERATURE (2)

B. Teaching Methods

Two methods = Direct Instruction and Quantum method

1. Quantum Method :

a cognitivist student-centered method in which the students are facilitated inductively with process oriented approach in writing their target text. /DePorter-Supercamp ,1982/

- **Concept** : Cognitivist unified - accelerated (*TANDUR _ AMBAK*; Theirs to ours - Ours to theirs)
- **Procedure**: preparing, drafting, sharing, revising, editing, rewriting, evaluating (DePorter & Hernacki, 2005a:)
- **Advantages**: processes of writing transparent & provides basis for teaching (Hyland,2003).
- **Disadvantages** : long time (Hasan & Akhand,2010) + fluent learners (Grossman ,2009)

2. Direct Instruction Method:

a behaviourist teacher-centered method in which the teacher guided the students deductively with product oriented approach in writing their target text. /Engelmann,1964/

- **Concept** : explicit instruction (Model-Lead-Test : I do it - We do it - You do it). (Price & Nelson, 2010).
- **Procedure**: orientation, presentation, structured practice, guided practice, independent practice (Bruce and Weil ,1996 in Setiawan, et al., 2010).
- **Advantages**: learners learn how to write in English composition systematically (Tangpermpoon ,2008).
- **Disadvantages**: overemphasize 'accuracy' (Tangpermpoon,2008) + imitated model writing (Hasan & Akhand,2010)

CHAPTER II

REVIEW OF RELATED LITERATURE (3)

Comparison of Teaching Methods (Quantum method vs Direct Instruction method)

No	Aspect	Quantum Method	Direct Instruction Method
1	<i>Learning theory</i>	Cognitivism	Behaviourism
2	<i>Learning model</i>	student-centred	teacher-centred
3	<i>Learning strategy</i>	Inductive	Deductive
4	<i>Writing approach</i>	Process oriented	Product oriented
*	Teaching Steps	1. preparing, 2. drafting, 3. sharing, 4. revising, 5. editing, 6. rewriting 7. evaluating	1. orientation, 2. presentation, 3. structured practice, 4. guided practice, 5. independent practice

CHAPTER II

REVIEW OF RELATED LITERATURE (4)

C. Creativity

an important intelligence (Sternberg, triarchic 2003 + WICS 2001). /PAIKEM/

1. Definition of Creativity

Creativity is the capability owned by creative people (*person*) which can be realized by intrinsic or extrinsic factors (*press*) and manifested in specific stages (*process*) to present novel and appropriate result (*product*).

2. Components of Creativity

Guilford SOI models 1959 : Divergent thinking operations (flexibility, fluency, and originality); evaluative thinking operations (Elaboration), and convergent thinking operations (Redefinition).

Four indicators (TKV) : flexibility, fluency, originality, elaboration.

3. Testing Creativity

- One of approaches to measure creativity
- Guilford (1959) in Anderson (1959) : characteristic of creative people (fluency of thinking, flexibility of thinking, originality, redefinition, elaboration, tolerance of ambiguity, commitment, & risk taking.)
- Guilford SOI test 1967 - TTCT 1974 - Munandar's TKV 1977
- Munandar's TKV 1977 (Tes Kreativitas Verbal - Verbal Creativity Test to determine CQ based on four aspects: flexibility, fluency, originality, & elaboration - 6 x 4 items : (1.) Initial Words/Word Beginning (*Tes Permulaan Kata*), (2) Forming Words/Anagram (*Tes Membentuk Kata*), (3) Three-Words-Sentence (*Tes Kalimat-Tiga-Kata*), (4) Characteristics Similarity/Things Categories (*Tes Kesamaan Sifat*), (5) Unusual Usage/Alternate Use (*Tes Penggunaan tak lazim*) & (6) Cause-Effect/ Consequences (*Tes Sebab - Akibat*)

CHAPTER II

REVIEW OF RELATED LITERATURE (5)

D. Relevant Research

- The researcher appreciates all the works related with variables (8 +)

E. Rationale

1. ***Quantum method is more effective than Direct Instruction method***

Quantum method provides and support more chances the students to be active learners and creative writers than Direct Instruction method

2. ***The students having high creativity have better writing skill than those having low creativity***

The students having high creativity tend to be more creative, critical, and innovative than those having low creativity.

3. ***There is an interaction between teaching methods and creativity to teach writing***

– The learners having high CQ will be comfortable using Quantum method because they have high capacities to explore ideas creatively. ***Quantum method is suitable for the students having high CQ.***

– The students having low CQ will be suitable when Direct Instruction method is applied in their classroom activity because they prefer being controlled or guided. ***Direct Instruction is suitable for the students having low CQ.***

F. Hypotheses :

1. Quantum method is more effective than Direct Instruction method to teach writing to the eighth grade students of SMPN 1 Bulukerto in the 2011/2012 academic year
2. The students having high creativity have better writing skill than those having low creativity of the eighth grade students of SMPN 1 Bulukerto in the 2011/2012 academic year
3. There is an interaction between teaching methods and students' creativity in teaching writing to the eighth grade students of SMPN 1 Bulukerto in the 2011/2012 academic year

CHAPTER III

RESEARCH METHODOLOGY (1)

A. Place and Time of the Research

at SMP N 1 Bulukerto in the 2011/2012 academic year
from July 2011 to March 2012

B. Research Method

This experimental research to find out whether there is a cause-effect relationship between teaching methods and writing achievement viewed from creativity or not by comparing the students' writing tests achievement between the experimental and the control group.

The experimental group is taught by using Quantum method and the control group is taught by using conventional Direct Instruction one.

Each group is classified into two different levels of creativity; the high & the low.

C. Research Design

The experimental research design used in the research is a 2×2 factorial design by technique of multifactor analysis of variance (ANOVA)

Attribute Variable (X_2)	Experimental Variable (X_1)	
Psychological Aspect	Treatment= Teaching method (A)	
Creativity (B)	Quantum method (A_1)	Direct Instruction method (A_2)
High CQ (B_1)	Cell 1 (A_1B_1)	Cell 3 (A_2B_1)
Low CQ (B_2)	Cell 2 (A_1B_2)	Cell 4 (A_2B_1)

Note = 8 Groups of Data

1. A_1 = The writing scores of the students who are taught by Quantum method
2. A_2 = The writing scores of the students who are taught by Direct Instruction method
3. B_1 = The writing scores of the students having high CQ
4. B_2 = The writing scores of the students having low CQ
5. A_1B_1 = The writing scores of the students having high CQ who are taught by Quantum method
6. A_1B_2 = The writing scores of the students having low CQ who are taught by Quantum method
7. A_2B_1 = The writing scores of the students having high CQ who are taught by Direct Instruction method
8. A_2B_2 = The writing scores of the students having low CQ who are taught by Direct Instruction method

D. Subject of the Research

Population :

the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.

Sample & Sampling:

by using cluster random sampling + A lottery technique

- class VIII B as the experimental group who are taught by using Quantum method,
- class VIII C as the control group who are taught by using Direct Instruction method.
- one of other eighth grade classes (class VIII A) was used as the try-out group

E. Technique of Collecting Data

The main ways to get the data in this research are test methods

1. Creativity Quotient Test : Munandar's TKV (Tes Kreativitas Verbal)
2. Writing Composition Test :

All of the test items are readable & Inter-rater scoring

F. Technique of Analyzing Data

These data can be subjected to statistical analysis : description & inference.

- ***Descriptive statistics***

Determining data in the working table of frequency distribution & the graph of histogram ; mean, median, mode & standard deviation

- ***Inferential statistics***

The data analysis used is the analysis of two-way variance with the same cell.

1. ***Prerequisites Test*** = the data first must come from populations which are distributed normally; and (2) homogenously.

a. **Normality test** = Lilliefors formula

If the $L_{obs} < L_{table}$, H_0 is accepted (Normal).

b. **Homogeneity test** = Bartlet formula

If the $X^2_{obs} < X^2_{table}$, H_0 is accepted (Homogen).

2. ***Testing Hypothesis*** =

a. **Anova test** = Two-way ANOVA with the same cell to find out whether there are effects and interaction among IV (X) toward DV (Y).

If the $F_{obs} > F_{table}$, H_0 is rejected (significant).

b. **Tukey's test** = comparative test to find out the significant effects or mean test.

If the $q_{obs} > q_{table}$, H_0 is rejected (significant).

G. Statistical Hypotheses

1. The differences between Quantum (A_1) and Direct instruction (A_2) in teaching writing skill for the eight grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.

$$H_0 : \mu_{A1} = \mu_{A2}$$

There is no difference in writing skill between the students who are taught by using Quantum method (A_1) and those who are taught by using Direct Instruction method (A_2).

$$H_1 : \mu_{A1} > \mu_{A2}$$

Quantum method (A_1) is more effective than Direct Instruction method (A_2) to teach writing.

2. The differences between the eight grade students of SMP N 1 Bulukerto in the 2011/2012 academic year having high creativity (B_1) and those having low creativity (B_2).

$$H_0 : \mu_{B1} = \mu_{B2}$$

There is no difference in writing skill between the students having high creativity (B_1) and those having low creativity (B_2).

$$H_1 : \mu_{B1} > \mu_{B2}$$

The students having high creativity (B_1) have better writing skill than those having low creativity (B_2).

2. The interaction between teaching methods (A) and students' creativity (B) in teaching writing skill for the eight grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.

$$H_0 : A \times B = 0$$

There is no interaction between teaching methods (A) and students' creativity (B) in teaching writing.

$$H_1 : A \times B > 0$$

There is an interaction between teaching methods (A) and students' creativity (B) in teaching writing.

CHAPTER IV

RESULT AND DISCUSSION (1)

A. Description Data

The Data of Descriptive Statistics

No	Groups	N	Total	Max	Min	Range	Class	Interval
1	A ₁	24	2032	90	78	12	5	3
2	A ₂	24	1978	88	77	11	5	3
3	B ₁	24	2031	90	77	13	5	3
4	B ₂	24	1979	88	78	10	5	2
5	A ₁ B ₁	12	1062	90	87	3	4	1
6	A ₁ B ₂	12	970	85	78	7	4	2
7	A ₂ B ₁	12	969	85	77	8	4	3
8	A ₂ B ₂	12	1009	88	80	8	4	3

The Summary of Descriptive Statistics

No	Groups	N	Mean	Median	Mode	Stdev
1	A ₁	24	84.63	85.50	88.50	4.51
2	A ₂	24	82.50	82.64	83.93	3.15
3	B ₁	24	84.75	85.50	88.50	4.36
4	B ₂	24	80.17	80.25	80.50	2.18
5	A ₁ B ₁	12	88.50	88.50	88.50	1.00
6	A ₁ B ₂	12	80.83	80.50	78.75	2.39
7	A ₂ B ₁	12	80.50	80.30	80.00	2.81
8	A ₂ B ₂	12	84.25	84.50	84.79	2.60

(Appendix 3.1.1 - 3.1.8, pp. 341 - 377)

CHAPTER IV

RESULT AND DISCUSSION (2)

B. The Prerequisites Tests

The Summary of Normality Test

No	Groups	N	L_{obs}	L_{table}	Test Result	Test decision	Description
1	A_1	24	0.1186	0.173	$L_{obs} < L_{table}$	H_0 is accepted	Normal
2	A_2	24	0.0975	0.173	$L_{obs} < L_{table}$	H_0 is accepted	Normal
3	B_1	24	0.1272	0.173	$L_{obs} < L_{table}$	H_0 is accepted	Normal
4	B_2	24	0.0884	0.173	$L_{obs} < L_{table}$	H_0 is accepted	Normal
5	A_1B_1	12	0.1915	0.242	$L_{obs} < L_{table}$	H_0 is accepted	Normal
6	A_1B_2	12	0.1809	0.242	$L_{obs} < L_{table}$	H_0 is accepted	Normal
7	A_2B_1	12	0.1308	0.242	$L_{obs} < L_{table}$	H_0 is accepted	Normal
8	A_2B_2	12	0.1356	0.242	$L_{obs} < L_{table}$	H_0 is accepted	Normal

The Summary of Homogeneity Test

No	Variances	X^2_{obs}	X^2_{table}	Test Result	Test decision	Description
1	$X_1 X_2 X_3 X_4$	6.723	7.815	$X^2_{obs} < X^2_{table}$	H_0 is accepted	Homogenous
2	$X_1 X_2$	3.129	3.841	$X^2_{obs} < X^2_{table}$	H_0 is accepted	Homogenous
3	$X_3 X_4$	3.570	3.841	$X^2_{obs} < X^2_{table}$	H_0 is accepted	Homogenous

(Appendix 3.2.1 - 3.2.9 , pp. 378 - 392)

Since all of the data were distributed normally and homogenous, the ANOVA test could be used.

CHAPTER IV

RESULT AND DISCUSSION (3)

C. Testing Hypotheses

The Summary of the Mean Scores

CQ (B)	TEACHING METHODS (A)		Total
	Quantum (A ₁)	Direct Instruction (A ₂)	
High CQ (B ₁)	A ₁ B ₁ = 88.50	A ₂ B ₁ = 80.75	B ₁ = 84.63
Low CQ (B ₂)	A ₁ B ₂ = 80.83	A ₂ B ₂ = 84.08	B ₂ = 82.46
Total	A ₁ = 84.67	A ₂ = 82.42	Tot = 83.54

The Summary of a 2x2 Multifactor Analysis of Variance

Source of Variance	SS	d.f	MS	F _{obs}	F _{t(.05)}	F _{t(.01)}	Result	Decision	Decision
Between Columns	60.75	1	60.750	12.271	4.06	7.25	f ₀ > f _t	significant	significant
Between Rows	56.33	1	56.333	11.379	4.06	7.25	f ₀ > f _t	significant	significant
Column by rows /Interaction	363.00	1	363.000	73.322	4.06	7.25	F ₀ > f _t	significant	significant
Between groups	480.08	3	160.028						
Within groups	217.83	44	4.951						
Total	697.92	47	14.849						

(Appendix 3.3.1, pp. 393 - 397)

CHAPTER IV

RESULT AND DISCUSSION (4)

- Based on the result, it can be concluded that:
 1. **The effects of applying teaching methods toward the students' writing skill**
Because the value of F_o between columns/teaching methods (12.271) is higher than the value of F_{\dagger} (.05) (4.06) and F_{\dagger} (.01) (7.25), **there is a significant difference on the student's writing skill between those who are taught using Quantum method and those who are taught using Direct Instruction method.** Since the mean of the writing scores of the students who are taught by using Quantum Method (A_1 84.67) is higher than that of those who are taught by using Direct Instruction method (A_2 82.42), Quantum method is more effective than Direct Instruction method to teach writing.
 2. **The effect of CQ scores toward the students' writing skill**
Because the value of F_o between rows/CQ scores (11.379) is higher than the value of F_{\dagger} (.05) (4.06) and F_{\dagger} (.01) (7.25), **there is a significant difference on the students' writing skill between those having high CQ and those having low CQ.** Since the mean of the writing scores of the students having high CQ scores (B_1 =84.63) is higher than that of those having low CQ (B_2 = 82.46), the students having high CQ have better writing skill than those having low CQ.
 3. **The interaction of teaching methods and CQ scores toward the students' writing skill**
Because the value of F_o columns by rows/interaction (73.322) is higher than the value of F_{\dagger} (.05) (4.06) and F_{\dagger} (.01) (7.25), **there is an interaction between teaching methods and CQ scores toward the students' writing skill.** The effect of teaching methods on writing skill depends on the degree of CQ scores.

Since the results of two-way ANOVA show that all the values of H_o are rejected which means all hypotheses are significant, it is necessary to find out the significant effects or mean test with comparative test by using Tukey's post-hoc test.

CHAPTER IV

RESULT AND DISCUSSION (5)

C. Testing Hypotheses

The Differences of Mean Scores

No	1	2	Test Result
1	$A_1 = 84.67$	$A_2 = 82.42$	$A_1 > A_2 = (2.25)$
2	$B_1 = 84.63$	$B_2 = 82.46$	$B_1 > B_2 = (2.17)$
3	$A_1B_1 = 88.50$	$A_1B_2 = 80.75$	$A_1B_1 > A_1B_2 = (7.75)$
4	$A_2B_2 = 84.08$	$A_2B_1 = 80.83$	$A_2B_2 > A_2B_1 = (3.25)$

The Summary of Tukey's Test

No	q_{obs}	$q_{table (0,05)(4,44)}$	$q_{table (0,01)(4,44)}$	Result	Description
1	$A_1 - A_2 = 4.95$	3.79	4.70	$q_{obs} > q_{table}$	Significant
2	$B_1 - B_2 = 4.77$	3.79	4.70	$q_{obs} > q_{table}$	Significant
3	$A_1B_1 - A_2B_1 = 12.07$	3.79	4.70	$q_{obs} > q_{table}$	Significant
4	$A_2B_2 - A_2B_1 = 5.06$	3.79	4.70	$q_{obs} > q_{table}$	Significant

(Appendix 3.3.2, pp. 398 - 402)

CHAPTER IV

RESULT AND DISCUSSION (6)

- Based on the result tables above, it can be concluded that:

1. Quantum method compared with Direct Instruction method ($A_1 - A_2$)

Because the value of q_{obs} between columns A_1 and A_2 which compares Quantum with Direct Instruction method (**4.95**) is higher than the value of $q_{+}(.05)$ (3.79) and $q_{+}(.01)$ (4.70), **Quantum method differs significantly from Direct Instruction method to teach writing.** Since the mean score of the students who are taught by using Quantum Method ($A_1 = 84.67$) is higher than that of those who are taught by using Direct Instruction method ($A_2 = 82.42$), the writing skill of the students who are taught by using Quantum method (A_1) is better than that of those who are taught by using Direct Instruction method (A_2).

2. High creativity compared with low creativity ($B_1 - B_2$)

Because the value of q_{obs} between rows B_1 and B_2 which compares High with low creativity (**4.77**) is higher than the value of $q_{+}(.05)$ (3.79) and $q_{+}(.01)$ (4.70), **the students having high CQ differ significantly from those having low CQ in their writing skill.** Since the mean score of the students having high CQ ($B_1 = 84.63$) is higher than that of those having low CQ ($B_2 = 82.46$), the writing skill of the students having high CQ (B_1) is better than that of those having low CQ (B_2).

3. Quantum method compared with Direct Instruction method for students having high creativity ($A_1B_1 - A_2B_1$)

Because the value of q_{obs} between cells A_1B_1 and A_2B_1 which compares Quantum method with Direct Instruction method for students having high CQ (**12.07**) is higher than the value of $q_{+}(.05)$ (3.79) and $q_{+}(.01)$ (4.70), **Quantum method differs significantly from Direct Instruction method to teach writing for students having high CQ scores.** Since the mean score of the students having high CQ who are taught by using Quantum method ($A_1B_1 = 88.50$) is higher than that of those having high CQ who are taught by using Direct Instruction method ($A_2B_1 = 80.75$), the writing skill of the students having high CQ who are taught by using Quantum method (A_1B_1) is better than that of those having high CQ who are taught by using Direct Instruction method (A_2B_1).

4. Quantum method compared with Direct Instruction method for students having low creativity ($A_1B_2 - A_2B_2$)

Because the value of q_{obs} between cells A_2B_2 and A_1B_2 which compares Direct Instruction method with Quantum method for students having low CQ (5.06) is higher than the value of $q_{+}(.05)$ (3.79) and $q_{+}(.01)$ (4.70), ***Direct Instruction method differs significantly from Quantum method to teach writing for students having low CQ.*** Since the mean score of the students having low CQ scores who are taught by using Direct Instruction method ($A_2B_2 = 84.08$) is higher than that of those having low CQ who are taught by using Quantum method ($A_1B_2 = 80.83$), the writing skill of the students having low CQ s who are taught by using Direct Instruction method (A_2B_2) is better than that of those having low CQ who are taught by using Quantum method (A_1B_2).

Based on (3) and (4) above, it can be concluded that ***there is an interaction between teaching methods and creativity in teaching writing skill.*** It means that Quantum method ***is more effective*** than Direct Instruction method to teach writing for the students having high CQ and Direct Instruction method is more effective than Quantum method to teach writing for the students having low CQ. In the other words, the students having high creativity ***are better taught*** by using Quantum method and the students having low creativity are better taught by using Direct Instruction method.

E. Discussion of Data Analysis

1. **Quantum method is more effective than Direct Instruction method to teach writing to the eighth grade students of SMPN 1 Bulukerto in the 2011/2012 academic year**

Because **Quantum method** facilitates the students to write creative compositions inductively in every phase of their learning activities, logically the students who are taught by using Quantum method (A_1) make not only comprehensive but also communicative compositions. In addition, since Quantum method applied technical procedure of California writing project which is in line with the process-oriented approach (DePorter & Hernacki, 2005a), it makes processes of writing transparent, and provides basis for teaching (Hyland, 2003). As the result, the students who are taught by using Quantum method (A_1) can do their writing assignment well. Thus, **Quantum method is an effective method to teach writing.**

Because **Direct Instruction method** fosters passive learning with very low student involvement and does not give enough challenge for the students to develop their creativity, logically Direct Instruction method fails to improve students' writing skill. In addition, since Direct Instruction method applies the product-oriented approach (Setiawan, et al., 2011), it did not help students in producing a good composition given in the exam hall as they failed to showcase their ability to write effectively the structure of the composition in their answer scripts (Hasan & Akhand, 2010). As the result, the students who are taught by using Direct Instruction method (A_2) can not do their writing assignment as well as the students who are taught by using Quantum method (A_1). Thus, **Direct Instruction method is not as effective as Quantum method to teach writing.**

2. **The eighth grade students of SMPN 1 Bulukerto in the 2011/2012 academic year having high creativity have better writing skill than those having low creativity.**

Because the students having high CQ (B_1) tend to be creative, critical, enthusiastic, and innovative, logically they can 'focus' and learn better in the instructional materials and accomplish their tasks assignments more completely and creatively. In addition, since writing as one of productive language skill can also be viewed as a creative activity (DePorter & Hernacki, 2005a), the students having high CQ (B_1) can do their writing assignment well because they have all or most of the personality traits of creative people (Guilford, 1959) which are necessary for the students in creating their compositions fluently, correctly, and appropriately based on the indicators of the writing skill (content, organization, vocabulary, grammar, and mechanics). As the result, **the students having high CQ (B_1) have good writing skill.**

Because the students having low CQ (B_2) tend to be lazy, passive, and anxious in their writing process, logically they commonly face several problems to understand the instructional materials and stuck on some difficulties to accomplish their tasks assignments completely. In addition, since writing as one of productive language skill can also be viewed as a creative activity (DePorter & Hernacki, 2005a), the students having low CQ (B_2) can not do their writing assignment as well as the students having high CQ (B_1) because they do not have all or most of the personality traits of creative people (Guilford, 1959) which are necessary for the students in creating their compositions fluently, correctly, and appropriately based on the indicators of the writing skill (content, organization, vocabulary, grammar, and mechanics). Thus, **the students having low CQ (B_2) do not have writing skill as good as the students having high CQ (B_1).**

CHAPTER IV

RESULT AND DISCUSSION (10)

3. There is an interaction between teaching methods (A) and the students' creativity (B) in teaching writing skill for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year
 - a. Quantum method is more effective than Direct Instruction method to teach writing to the eighth grade students having high CQ of SMPN 1 Bulukerto in the 2011/2012 academic year.

Because the students having high CQ (B_1) have good personality traits of creative people, logically they need to be taught in a certain way that better matched not only with their high potential abilities but also their unique personal trait to achieve their best. In addition, since certain enablers such as creative personality traits shall be welcomed and fostered in class (Sternberg & Lubart, 1999), the appropriate teaching method should have purposive efforts which can be utilized to cultivate creative aptitudes as well as processes that may enhance the probability for creativity (Plucker, et.al., 2004).

Because Quantum method accomodates students' potentials, **the students having high CQ who are taught by using Quantum method (A_1B_1)** are logically comfortable because they have high capacities to optimize their potentials in exploring ideas creatively and making their writing compositions fluently. In addition, since Quantum method applies the process-oriented approach (DePorter & Hernacki, 2005a) makes processes of writing transparent, and provides basis for teaching (Hyland, 2003), the last products created are not only comprehensive but also communicative compositions. Thus, **Quantum method is an effective method to teach writing for the students having high CQ.**

Because **Direct Instruction method** refers to the classroom activities which are totally led by the teacher and fosters passive learning, logically **the students having high CQ who are taught by using Direct Instruction method (A_2B_1)** are dissapointed and causes their compositions unsatisfied. In addition, since Direct Instruction method applies the product-oriented approach (Setiawan, et al.,2010) did not help students in producing a good composition given in the exam hall as they failed to showcase their ability to write effectively the structure of the composition (Hasan & Akhand, 2010). Thus, **Direct Instruction method is not as effective as Quantum method to teach writing for the students having high CQ.**

CHAPTER IV

RESULT AND DISCUSSION (11)

- b. **Direct Instruction method is more effective than Quantum method to teach writing to the eighth grade students having low CQ of SMPN 1 Bulukerto in the 2011/2012 academic year.**

Since writing is also viewed as creative activity (DePorter & Hernacki, 2005a), logically the writing skill of **the students having low CQ (B_2)** is not as good as that of those having high CQ (B_1). They need to be taught in a conventional way that better matched not only with their low potential abilities but also their novice personal trait to achieve their 'best' they can. Being novice to intermediate learners, the students having low CQ (B_2) need a direct, strong instructional guidance to prevent them in acquiring misconceptions or incomplete or disorganized knowledge (Kirschner, et al., 2010).

Because the students are expected to be creative, and active, logically **the students having low CQ who are taught by using Quantum method (A_1B_2)** will get difficulty to explore ideas because of their lackness of creativity to generate ideas. In addition, since Quantum method applies the process-oriented approach (DePorter & Hernacki, 2005a) it needs learners who were already verbally fluent (Grossman, 2009) otherwise they faced problems in brainstorming and organizing their ideas cohesively (Hasan & Akhand, 2010). the students having low CQ who are taught by using Quantum method (A_1B_2) are not comfortable and satisfied in their assignments. Thus, ***Quantum method is not an effective method to teach writing for the students having low CQ.***

Because Direct Instruction method fosters passive learning with very low student involvement, logically the students having low CQ who are taught by using Direct Instruction method (A_2B_2) feel comfortable since they prefer being controled or guided. In addition, since Direct Instruction method applies the product-oriented approach (Setiawan, et al., 2011), they can learn how to write systematically (Tangpermpoon 2008), the last products written by the students having low CQ who are taught by using Direct Instruction method (A_2B_2) are not only more accurate but also more satisfied than the last products created by the students having low CQ who are taught by using Quantum method (A_1B_2). Thus, **Direct Instruction method is more effective than Quantum method to teach writing for the students having low creativity.**

CHAPTER IV RESULT AND DISCUSSION (12)

Based on the discussion of data analysis above, it was then proved that *there is an interaction between teaching methods (A) and students' creativity (B) in teaching writing skill for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.*

Both the types of teaching methods and the levels of students' creativity are also proved to interact each other and give significant effect on the students' writing skill. Thus, the effect of teaching methods on writing skill depends on the degree of CQ scores.

Being supported by the quantitative computations and statistical conclusions, it can be concluded that *Quantum method is more effective than Direct Instruction method to teach writing for students having high CQ* but it is not appropriate to apply toward the students having low CQ. Meanwhile, *Direct Instruction method is more effective than Quantum method to teach writing for students having low CQ* but it is not suitable to apply toward the students having high CQ.

So, finally it can be said that *the students having high CQ are better taught by using Quantum method in teaching writing skill for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year* but *the students having low CQ are better taught by using Direct Instruction method in teaching writing skill for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.*

CHAPTER V CONCLUSION, IMPLICATION, & SUGGESTION (1)

A. Conclusion

Based on the statistical analysis, the findings of the research are as follows:

1. **Quantum method is more effective than Direct Instruction method to teach writing.**
2. **The students having high CQ (B_1) have better writing skill than the students having low CQ (B_2).**
3. **There is an interaction between two variables, teaching methods and CQ scores in teaching writing for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year.**

The students having high CQ who are taught by using Quantum method (A_1B_1) have better writing skills than the students having high CQ who are taught by using Direct Instruction method (A_2B_1). Meanwhile, the students having low CQ who are taught by using Direct Instruction method (A_2B_2) have better writing skills than the students having low CQ who are taught by using Quantum method (A_1B_2).

Thus, based on the three findings above, it can be concluded that there is an interaction between two variables, teaching methods and CQ scores in teaching writing for the eighth grade students of SMP N 1 Bulukerto in the 2011/2012 academic year. **The students having high creativity are better taught by using Quantum method than Direct Instruction method. Meanwhile, the students having low creativity are better taught by using Direct Instruction method than Quantum method.**

CHAPTER V CONCLUSION, IMPLICATION, & SUGGESTION (2)

B. Implication

The implementation of teaching methods can affect the students' writing skill. The use of Quantum method during classroom activities in the experimental class gives better effect than Direct Instruction method in the control class.

1. Quantum method offers newly unique joyful learning experiences to make students more enthusiastic than conventional method they used to.
2. Quantum method enables the students to be active and creative in composing their own ideas more authentically by using several brainstorming techniques (pre-writing)
3. Quantum method can enlarge the students' learning community to develop their social performances as well as cognitive competences (the stages of sharing and revising).

To achieve the most optimum writing skill, there are some important things for Quantum teachers as follows:

1. **Preparing** students build a strong base for the topic based on their own experience and knowledge. Brainstorming techniques (mind mapping, clustering, and fast writing) can be used in exploring ideas creatively for their compositions.
2. **Drafting** students trace and develop ideas by focusing in the contents. 'Show Not Tell' technique can be used to make the composition more 'fresh' and 'alive'.
3. **Sharing** students need to share their compositions one another to make their compositions become more consistent, comprehensive, and communicative.
4. **Revising** students revise their works based on the necessary feedbacks wisely.
5. **Editing** students should correct all grammatical errors and mechanics to make sure all is correct and complete.
6. **Rewriting** students rewrite their revised works with additional new content in necessary editing changes.
7. **Evaluating** students check whether their works are complete to evaluate or not.

CHAPTER V CONCLUSION, IMPLICATION, & SUGGESTION (3)

C. Suggestion

For Teachers

Since Quantum method can lead students to be more active and creative, it is recommended for teacher to implement Quantum method in their teaching and learning activities because of its advantages toward the students' competences and the teacher's performance. In addition, professional teacher should emerge, energize, and develop their students' creativity to improve their writing skill.

For Students

Being good writers, students should not only be active and creative to practice in generating and developing ideas with brainstorming techniques but also communicative and interactive in sharing and revising their ideas with others in their learning community to develop and improve their writing composition. In addition, since creativity is needed to write good composition, students are also suggested to encourage and energize their creativity by themselves.

For Other researchers

the writer believes that the thesis may contain a large number of mistakes that needs so many corrections and suggestions in making the work better. With all the limitations certainly existed in it, hopefully, this little work can be utilized as an additional reference for similar research with different characteristics of population and variables in the future

Contents & Appendices

MAIN THESIS (p. i - xxiii ; 1 - 175)

Forepages = i - xxiii

Chapter 1 = INTRODUCTION (p. 1 - 12)

Chapter 2 = REVIEW OF RELATED LITERATURE (p. 13 - 83)

Chapter 3 = RESEARCH METHODOLOGY (p. 84 - 103)

Chapter 4 = RESULTS AND DISCUSSION (p. 104 - 161)

Chapter 5 = CONCLUSION, IMPLICATION, AND SUGGESTION (p. 162 - 167)

BIBLIOGRAPHY - References (p. 168 - 175)

APPENDICES (p. 176 - 408)

Appendix 1 = RESEARCH INSTRUMENT (p. 176 - 318)

Lesson Plan (Experimental & Control Class) ; The Initial Creativity Test (Munandar's TKV)
+ The Final Writing Test (Guided Composition)

Appendix 2 = COLLECTING DATA (p. 319 - 342)

The Results of the Initial Creativity Test ; The Results of the Final Writing Test ; The
Eight Groups of Data in the Research

Appendix 3 = STATISTICAL COMPUTATION (p. 343 - 408)

Descriptive Statistics ; The Prerequisite Tests ; The Result of Testing Hypothesis ;
Statistical Tables:

OTHER WORKS

Journals = Main Thesis + Thesis Articles (CD published : doc. & pdf.)

Abstracts = English / Indonesian (CD files : doc. & pdf)

Others = Thesis Proposal ; Research Instrument;

*Thank You
For The Attention*